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ATO Japan Promotes GM Papaya to High Profile Food Service Providers

Report Categories:

CSSF Activity Report

Agricultural Trade Office Activities

Trip Report

Market Development Reports

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Report Highlights:

ATO Japan supported the first reverse trade mission to promote genetically modified (GM) Rainbow Papaya. The Hawaii Papaya Industry Association (HPIA) and the Hawaii State Department of Agriculture (HDOA) hosted an inbound buying mission from June 12 through June 16, 2013. ATO recruited ten high quality buyers from the food service industry, including executive chefs and managing directors. As a result of the mission, 9 out of 10 mission members are now working to import Rainbow papaya and develop American/Hawaiian menu fairs. Total imports of Rainbow for these fairs are expected to exceed 2600 cases. These menu fairs create an opportunity to introduce Rainbow papaya to thousands of restaurant guests.

General Information:

1. Opportunities and Constraints

- Japan market has the below opportunities and constraints:

i) Opportunities:

- Japan is only the second country to allow the import of the GMO Rainbow papaya after Canada
- Hawaii is one of the top travel destinations and has a favorable image as a tropical fruit source
- Until two decades ago, Hawaiian papaya was a popular fruit among food service industry
- The food service industry takes a more accommodating view toward food imports than the retail industry

ii) Constraints:

- Generally, Japanese consumers and media generally are apprehensive regarding GMO foods
- Papaya has a lower than average recognition score
- Overall fresh fruit consumption is decreasing year-by-year
- The food service players require competitive prices. Philippines exports papaya at cheaper price than the U.S.

2. Purpose:

ATO Marketing Specialist Masayuki (Alex) Otsuka recruited and accompanied a group of Japanese trade and media teams on the first GM Rainbow Papaya Trade Mission to Hawaii State from June 12 through 16, 2013. The trade mission project included educating the mission members about GM papaya, visiting papaya-related sites, and meeting with papaya industry representatives.

3. Project Background:

A) Japan import

In 1995, the U.S. exported more than 6,300 metric tons of papaya from Hawaii to Japan. Since then, U.S. papaya exports have dropped to 470 metric tons in 2012, just 7.5 percent of 1995 exports. This was due mainly to lack of supply from Hawaii for conventional papaya and a boom in mango consumption. The papaya ring spot virus devastated papaya production starting in the mid-90's. Japan's mango imports have increased from about 8,600 metric tons in 1997 to 12,400 metric tons in the peak year 2007, about an increase of 144 percent in a decade.

Japan Import: Fresh Papayas (HS: 0807.20-000)

| Country | Quantity: Unit Metric Tons | | | | | | | | | |
|---------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| World Total | 6,373 | 5,796 | 4,075 | 4,168 | 3,996 | 3,817 | 3,089 | 2,779 | 2,774 | 2,788 |
| Philippines | 66 | 2,391 | 2,328 | 2,637 | 2,769 | 2,918 | 2,494 | 2,278 | 2,285 | 2,316 |
| United States | 6,307 | 3,347 | 1,713 | 1,492 | 1,220 | 889 | 586 | 497 | 474 | 470 |
| Taiwan | - | 3 | 17 | 37 | 4 | 10 | 10 | 4 | 8 | 1 |

| | | | | | | | | | | |
|-------|---|----|----|---|---|---|---|---|---|---|
| Fiji | - | 44 | 17 | 2 | 3 | - | - | - | 1 | - |
| Other | - | 11 | - | - | - | - | - | - | 6 | 1 |

Japan Import: Fresh Mangoes (HS: 0804.50-011)

| Country | Quantity: Unit = Metric Tons | | | | | | | | | |
|---------------|------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|-------|
| | 1997 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| World Total | 8,599 | 9,627 | 12,139 | 12,383 | 12,389 | 11,589 | 11,103 | 10,391 | 10,055 | 9,741 |
| Mexico | 3,243 | 3,155 | 3,587 | 4,329 | 5,386 | 5,260 | 5,050 | 3,974 | 3,446 | 3,828 |
| Philippines | 4,831 | 5,618 | 6,274 | 5,443 | 3,797 | 3,070 | 2,720 | 2,834 | 2,197 | 2,113 |
| Thailand | 185 | 194 | 955 | 1,099 | 1,566 | 1,483 | 1,407 | 1,520 | 1,514 | 1,773 |
| Taiwan | 12 | 101 | 476 | 444 | 781 | 851 | 990 | 995 | 1,155 | 834 |
| Brazil | - | - | 250 | 403 | 445 | 316 | 395 | 571 | 551 | 598 |
| Peru | - | - | - | - | - | - | - | 60 | 958 | 339 |
| United States | 121 | 258 | 253 | 317 | 57 | 285 | 286 | 277 | 172 | 178 |
| Australia | 206 | 301 | 343 | 338 | 268 | 233 | 187 | 124 | 38 | 57 |
| Other | 1 | - | 1 | 10 | 89 | 91 | 68 | 36 | 24 | 21 |

B) Hawaiian Papaya Production Severely Affected by Virus

During 1970's, Hawaiian papaya production in Oahu was devastated by the papaya ringspot virus (PRSV). In the meantime, a major part of papaya production had migrated to the Hawaii Island. In 1990s, the virus spread quickly in the Big Island, making papaya production almost impossible. A USDA/ARS team, lead by Dr. Dennis Gonsalves, developed a genetically modified (GM) papaya. As a result, PRSV resistant red-meat (Sunup) papaya and successively yellow-meat (Rainbow) GM papayas were developed in Hawaii. For the full story, please see GAIN report JA1048 - http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Japan%20approved%20GM%20papaya_Tokyo_Japan_12-19-2011.pdf

The yellow-meat GM papaya, Rainbow Papaya, was approved for commercial production in the U.S. in May 1998, and has been harvested and distributed in the U.S. since 1999. The Rainbow Papaya is widespread across the Hawaii State and now makes up over 80 % of the total Hawaiian papaya crop.

In 1999, USDA petitioned Government of Japan (GOJ) to import Rainbow papaya, and after 12 years of work, the import and sale of Hawaiian Rainbow papaya were approved by GOJ on December 1, 2011.

Japan and Canada are only two foreign countries approved rainbow papaya import at the time of this writing.

3) Actual exports of Rainbow Papaya from Hawaii to Japan were as follows;

In 2011:

- COSTCO Japan imported about 1200 cases of Rainbow papaya and sold at their outlets in December
- A few dozen of cases of the Rainbow were exported for promotion purpose separately from COSTCO Japan imported

In 2012:

- A total about 400 cases were exported and almost of them were given for promotion purpose and a little was distributed for test sales
- No importer or distributor in Japan carried Rainbow papaya inventory throughout the year

In 2013:

- Until May, an HPIA member exported a couple of dozen cases for the purpose of sales promotion and academic events, and no Rainbow papaya has been exported for commercial purpose

After the 12 years-long examination period, GOJ has confirmed Rainbow papaya's food safety. Although COSTCO Japan had imported and started sales of the papaya at the day of commercial export was lifted two years ago, the company has suspended the import due to unfavorable sales results and GM food images linked to a vague anxiety in the market.

In 2012, Spa Resort Hawaiians accepted a few dozen of rainbow papaya for sale at their gift shop during summer vacation. The trial sale went well though they've briefed us that the company has received anonymous phone calls questioning their sales of GM papaya. Meanwhile, ATO has heard from a few national retailers about a threatening letter which was sent from a supposed consumer group. The letter requested that retailers not sell GM foods, citing emotional reasons. No produce wholesaler wanted to import GM papaya because they didn't want to create an image as a GM food importer and/or distributor. In the face of these threats, HPIA, HDOA and ATO Japan have decided that the food service industry was the best way to conquer these difficulties in the market.

4. Summary

Both HPIA and HDOA had no representation in Japan when the project started. Therefore, ATO Japan took it upon itself to conduct mission recruitment and preparation. With the abovementioned difficulties in mind, ATO Japan contacted with Pro-U.S. and Pro-Hawaii company owners of chain restaurants and executive chefs of major city hotels. As a result, the number of participants reached 10 executives from the food service industry.

In addition, HPIA has recruited two Japanese media representatives, an editor and a photographer of the magazine publisher, Lettuce Club, targeting women readers. The mission consisted of a total of 12 Japanese participants. .

Mission participants:

| Title of Participants | Company Name |
|-------------------------|-----------------------------------|
| Executive Chef | Suehiro Shoji Co., Ltd. |
| Chief Chef | Inter-Continental Hotel Tokyo Bay |
| President | Dokyu Co., Ltd. |
| Executive Chef | Spa Resort Hawaiians |
| Executive Chef | Serulian Tower Tokyo Hotel |
| Executive Chef | Koriyama View Hotel |
| Deputy Director | Four Seeds Co., Ltd. |
| Manager, Food Design | Café Company |
| Director Chef, F&B Div. | Hotel New Otani |
| President | Simple Company Inc. |
| Editor | Kadokawa Magazines |
| Photographer | Kadokawa Magazines |

Two weeks before the departure, ATO Japan held a preliminary meeting at the embassy while inviting and introducing all mission participants. The ATO Japan Director and the specialist briefed the mission members on the project purpose and benefit to the participants. This preliminary process encouraged the participants to plan papaya menu fairs afterwards,

During the mission, HPIA and HDOA organized a highly-condensed schedule for the Japanese buyers, including a day-long conference and workshop that covered every element of the Rainbow papaya including safety, deregulation, demand and supply, and marketing. HPIA also prepared a menu using Rainbow papaya during lunch time. The buyers asked many questions at a wrap-up session, leading to a productive conference.

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|  |  |
| Rainbow papaya trade conference in Kona | Specially prepared rainbow papaya menus served at the conference |



On the third day, all mission members traveled the Big Island from Kona to Hilo, visited papaya farms, a papaya processing factory, a restaurant related to the Culinary Arts of Hawaii Community College in Hilo, and met with representatives from HPIA. On the fourth and fifth days, the mission members inspected and observed a variety of sites where Rainbow papayas were sold and served in Oahu, such as a farmer's markets, retail stores, hotels, and local restaurants. During the site visits, all mission members studied the market situation and learned how to serve, cook and sell Hawaiian papayas. These

experiences provided useful ideas to the buyers and will help the buyers when they conduct papaya menu fairs in their restaurants.

The comments from the mission participants during the travel:

- Prior to the travel, I learned that equatorial fruits have been an important food for the evolution of humankind. Those fruits, including papaya, are nutritious and good for health. In addition, papaya was used a medication during ancient Maya civilization. .
- Papaya may have a good potential as same as mango, which is one of most popular fruits in Japan.
- Chefs should acquire not only cooking skills but also knowledge about allergy free circumstances and global warming phenomenon including broad knowledge of genetically modified organism (GMO). I want to respond to my customers' questions through this study tour.
- Nutrient-rich papaya can fit the purpose of Shokuiku (GOJ's promotion teaching elementary students how to eat for health)
- I understood how GM foods are beneficial when you think about global food issues.
- I emphasized the seed production of Rainbow papaya is controlled by one organization in Hawaii in order to retain quality..
- I leaned papaya contains rich-enzyme which suits meat menu/recipe.
- I didn't know that the papaya production in Oahu had been totally wiped out by the virus, and the GM papaya has saved the production in Hawaii.
- About 30 years ago in Japan, I remember that papaya was used for fruits parfait which was very expensive and only for a few wealthy people. I want to serve the papaya for everybody (at reasonable price).
- I thought that papaya should spoil quickly however Rainbow papaya seems to keep good quality longer because it is sorted out very carefully. (after visited a processing facility)
- Green papaya also has a good market potential in Japan. I want to buy it with Rainbow papaya.

These positive comments also reflected the mission success.

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|  |  |
| <p>Site visit: A papaya processing facility in Hilo, heat-treatment and sorting for export to Japan</p> | <p>Site visit: A Rainbow papaya farm in Hilo</p> |

| | |
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|  |  |
| <p>Site visit: papaya sales at the KCC farmers market in Oahu</p> | <p>All mission members both from Japan and the U.S.</p> |

5. Outcome

ATO Japan met with Fukushima based amusement facility “Spa Resort Hawaiians,” a leader of the mission participants. As a result of the mission, they decided to hold American Menu Fair from June 1st through the end of August, 2013. Rainbow papaya will be served at their buffet restaurants in their hotels during the menu fair. The company planned to buy a total of 1,500 cases of Rainbow papaya from Hawaii for the three month-long menu fair. In addition to this papaya import, the other seven mission participants also plan to buy a total of over 1,100 cases of the papaya for their upcoming menu fairs.

In conjunction with the papaya tour, the below menu fairs also feature U.S. beef and pork, New England lobster, U.S. rice, U.S. potato, and various U.S. food and beverages. .

Menu fair schedule

| Event date | Company name | # of outlets/Restaurant |
|------------------|-----------------------------------|------------------------------------|
| 6/1 - 8/31/2013 | Spa Resort Hawaiians | 3/buffet restaurants & a gift shop |
| 7/25 - 8/31/2013 | Inter-Continental Hotel Tokyo Bay | 1/Chef's Live Kitchen (see below) |
| 7/31 - 8/7/2013 | Koriyama View Hotel | 1/restaurant in the hotel |
| 8/1 - 31/2013 | Suehiro Steak Restaurant | 3/restaurants |
| 8/2 - 31/2013 | Dokyu Co., Ltd. | 25/tonkatsu, restaurant & Inst. |
| September 2013 | Serulian Tower Tokyu Hotel | 1/restaurant in the hotel |
| November 2013 | Café Company | 1/Oceans Burger Inn |
| Summer in 2014 | Four Seeds | TBD/Kua' Aina |
| TBD | New Otani | TBD |
| Through the year | Simple Company Inc. | Import and distribution |
| August 8, 2013 | Kadokawa Magazines | Report: Lettuce Club (see below) |

Snap shots of the menu fairs

| | |
|--|--|
|  <p>Menu fair catalogue - InterContinental Hotel Tokyo Bay: offering various papaya menus from August 1 through August 31, and a papaya present for the first day (Aug/1)</p> |  <p>Chef Tsukuda retails Rainbox papaya at the restaurant entrance. The menu fair has been featured by a dozen of TV programs and print media since its commence</p> |
|  <p>Menu fair catalogue – Suehiro Steak Restaurant: offering Hawaiian style Dining with cut Rainbox papaya with U.S. T-bone steak.</p> |  <p>Suehiro serves quality U.S. food and retails Rainbox papaya at three Suehiro restaurants in Tokyo</p> |

In addition to the actual trade and the menu fairs, the Papaya trade mission was reported in the biweekly magazine, “Lettuce Club, August 25, 2013 issue, which was created by the accompanying reporter and photographer. Lettuce Club has a large circulation of over 300,000 copies monthly and targets women readers, mainly married females. The 4 page-long Hawaiian papaya articles features market popularity, GMO history and health benefit of Hawaiian Rainbow Papaya. The total media value of the Hawaiian papaya articles in the magazine estimated at over \$82,000.

Magazine Lettuce Club, page #85-87, Aug/25/2013 issue:

食べてヘルシー! 美容にもいい!

ハワイパパイヤっておいしい!

ロコ人気 No.1 フルーツ!

ハワイでは数年前からアイサイボウやグリーンソーラーなどが出回り、ヘルシーな果物として注目を集めています。その中でも、健康に良いのがパパイヤ。おいしいの秘密はヘルシーな理由にあり!

ハワイパパイヤの歴史は古く、19世紀にハワイに持ち込まれた。当初は主に輸入品として流通していたが、近年では地元産の需要も増加している。パパイヤは、ビタミンC、ビタミンA、カリウム、繊維質が豊富で、ヘルシーな果物として知られている。

ハワイパパイヤ Q&A

Q パパイヤってどうやって食べるの?

A 半分切って、種を除いてください。パパイヤの種は硬くて食べられません。また、パパイヤの皮は苦味があるので、食べる際は皮を剥いてください。

Q パパイヤのバリエーションは、どうしておいしいの?

A 恵まれた土地で育てて、空気に慣れるから。パパイヤは、ハワイの気候と土壌に最適で、自然の恵みで育ちます。そのため、他の地域で育てたパパイヤよりも、より甘く、よりおいしいです。

Q パパイヤってヘルシーなの?

A 栄養バリエーションが豊富で、ヘルシーな食材です! パパイヤは、ビタミンC、ビタミンA、カリウム、繊維質が豊富で、ヘルシーな食材です。また、パパイヤは、低カロリーで、ダイエットにもおすすめです。

| | 100g | 100g | 100g | 100g | 100g |
|-------|--------|--------|--------|--------|--------|
| エネルギー | 43kcal | 45kcal | 80kcal | 57kcal | 40kcal |
| たんぱく質 | 0.7g | 0.8g | 1.2g | 0.6g | 0.5g |
| 脂質 | 0.1g | 0.1g | 0.1g | 0.1g | 0.1g |
| 糖質 | 10.0g | 10.0g | 10.0g | 10.0g | 10.0g |
| 繊維質 | 0.5g | 0.5g | 0.5g | 0.5g | 0.5g |
| ビタミンC | 120mg | 120mg | 120mg | 120mg | 120mg |
| ビタミンA | 1000IU | 1000IU | 1000IU | 1000IU | 1000IU |
| カリウム | 100mg | 100mg | 100mg | 100mg | 100mg |

At the hotel restaurant

At the papaya farm

パパイヤは、ハワイの気候と土壌に最適で、自然の恵みで育ちます。そのため、他の地域で育てたパパイヤよりも、より甘く、よりおいしいです。また、パパイヤは、ヘルシーな食材で、ダイエットにもおすすめです。

At the farmer's market

パパイヤは、ハワイの気候と土壌に最適で、自然の恵みで育ちます。そのため、他の地域で育てたパパイヤよりも、より甘く、よりおいしいです。また、パパイヤは、ヘルシーな食材で、ダイエットにもおすすめです。

The third page – mentions Rainbow saved the papaya industry in Hawaii, harvest and food service relations and deregulation in Japan

The second page – explains importance of papaya in Hawaii and GM papaya history while showing famous farmer's market photos

The trade mission for the food service industry achieved a successful outcome. On the other hand, the papaya is not yet to be sold at retail stores. Most retailers in Japan still refrain from selling GM papaya. Media reports occasionally tend to criticize GM food even though GOJ has confirmed safety of the

Rainbow papaya.

Continuous promotion efforts done by both U.S. and Japan governments are indispensable in order to dispel growing distrust in GM crops. The papaya trade mission made great strides among food service industry. ATO Japan believes that continuous inbound missions should be held for the food service industry in Japan for the next few years. Once the rainbow papaya becomes a familiar sight in the food service industry, distribution of GM papaya to the retail industry could emerge.

7. Itinerary

June 12 – Depart Tokyo for Kona via Honolulu, field trip in Kailua-Kona

June 13 – Rainbow Papaya Conference and workshop

June 14 – Hawaii Island from Kona to Hilo, field trip to papaya farms and a papaya processing factory, depart Hilo for Honolulu

June 15 – Field trip: Kapiolani Community College, Farmers Market and hotel restaurants

June 16 – Site survey: retail outlets, restaurants and hotels in Honolulu

June 17 – Depart Honolulu for Tokyo

June 18 – Arrive Tokyo